

REMARKS

Claims 1-3, 5-7, 10, and 11 are now pending in the application. Claim 4 is now cancelled. Claims 1, 7, 10, and 11 are now amended. The amendments are fully supported by the application as filed and do not present new subject matter. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

TELEPHONIC INTERVIEW

Applicant's representative, Brent G. Seitz, thanks Examiner Talbot for the courtesies extended during the telephonic interview of January 18, 2007. During the interview differences between the invention and the cited art were discussed. No agreements were reached.

REJECTION UNDER 35 U.S.C. § 103

Claims 1-7, 10, and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Banno et al. (U.S. Pat. No. 6,761,925) either alone or in combination with Applicant's admitted state of the art set forth in the specification at pg. 2, paragraph [0006]. This rejection is respectfully traversed.

Independent Claims 1, 7, 10, and 11 are now amended to recite, with reference to Figures 2-4 for exemplary purposes only, the following:

wherein the film patterns are line-shaped patterns, a first side portion [Wa] and a second side portion [Wb] in a line width direction of each of the film patterns are formed before a central portion [Wc] of each of the film patterns is formed between the first side portion and the second side portion;

wherein the first side portion [Wa] is formed by depositing a plurality of first droplets [1] spaced apart to define a first interval between each of the first droplets and subsequently depositing a second droplet [2] in each of the first intervals [Figures 2A and 2B];

wherein the second side portion [Wb] is formed by depositing a plurality of third droplets [3] spaced apart to define a second interval between each of the third droplets and subsequently depositing a fourth droplet [4] in each of the second intervals [Figures 3A and 3B]; and

wherein the central portion [Wc] is formed by depositing a plurality of fifth droplets [5] between the first and second side portions, the fifth droplets are spaced apart to define a third interval between each of the fifth droplets and subsequently depositing a sixth droplet [6] in each of the third intervals [Figures 4a and 4B].

Section 103 Rejection Based Applicant's Admitted State Of The Art

Applicant's invention provides numerous advantages over the prior art. As set forth in the Background section of Applicant's application, prior art methods for forming film patterns typically form, in a line extending direction, either the two ends of the line first before forming the center of the line, or the center of the line first with the two ends of the line formed thereafter. Forming film patterns in this manner presents a number of problems.

For example, forming multiple film patterns in this manner may result in lack of uniformity in thickness and appearance between the different patterns. This poses a significant problem when forming multiple film patterns along a substrate in close proximity to each other as two or more film patterns may converge. Further, forming patterns in this manner may cause the line patterns to have varying widths in the line

extending direction. See paragraph [0006] of the Background section of Applicant's application.

The methods of the present invention overcome the deficiencies of prior art methods. Specifically, using the methods set forth in independent Claims 1, 7, 10, and 11, multiple patterns each having a uniform thickness and appearance can be formed. See paragraph [0006] of the Background section of Applicant's application. This permits multiple line patterns to be formed along a substrate in close proximity to each other without two or more line patterns converging.

Numerous features of the present invention contribute to provide the above stated advantages, and others. Examples of such features include, as set forth in each of the independent claims and as illustrated in Figures 2-4, "wherein the film patterns are line-shaped patterns, a first side portion [Wa] and a second side portion [Wb] in a line width direction of each of the film patterns are formed before a central portion [Wc] of each of the film patterns is formed between the first side portion and the second side portion" (emphasis added).

Thus, Applicant's method is not anticipated or suggested by the prior art acknowledged in the Background section of Applicant's invention. Specifically, the prior art discussed in Applicant's application forms film patterns by forming, in a line extending direction, either the two ends of the line first before forming the center of the line or forming the center of the line first with the two ends of the line formed thereafter. The prior art discussed by Applicant fails to disclose or suggest, as set forth in independent Claims 1, 7, 10, and 11, "wherein the film patterns are line-shaped patterns, a first side portion [Wa] and a second side portion [Wb] in a line

width direction of each of the film patterns are formed before a central portion [Wc] of each of the film patterns is formed between the first side portion and the second side portion” (emphasis added).

Section 103 Rejection Based On Banno et al.

The Office Action acknowledges that Banno et al. “fails to specifically teach forming the periphery portion of the film prior to the interior portion of the film.” Office Action at 3. The Banno et al. reference simply appears to teach that film droplets can be deposited in an arbitrary order and that “dots may be deposited at every other dot locations first, and then a dot may be further deposited in each space.” Col. 37, lines 34 – 39. The Banno et al. reference fails to disclose or suggest depositing lines of the drops such that, in a line-width direction, side portions of the lines are formed first and central portions of the lines are formed second. The Banno et al. references fails to disclose or suggest that the disclosed arbitrary arrangement of dots is capable of producing multiple lines having a uniform thickness and appearance that do not converge, as Applicant’s methods do.

Thus, as set forth above, neither the Banno et al. reference nor the prior art discussed in Applicant’s Background disclose or suggest the following features of amended independent Claims 1, 7, 10, and 11: “wherein the film patterns are line-shaped patterns, a first side portion [Wa] and a second side portion [Wb] **in a line width direction** of each of the film patterns are formed before a central portion [Wc] of each of the film patterns is formed between the first side portion and the second side portion” (emphasis added). Therefore, the combination of the Banno et al.

reference and the admitted prior art fails to render obvious amended Claims 1, 7, 10, and 11, as well as any claims dependent therefrom.

Section 103 Rejection Based On Shigeoka

Claims 1-7, 10, and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shigeoka (JP 09-245,689) in combination with Applicant's admitted state of the art at page 2, paragraph [0006] of the specification. This rejection is respectfully traversed.

The Office Action acknowledges that the Shigeoka reference "fails to specifically teach forming the periphery portion of the film prior to the interior portion of the film." Office Action at 4. The Shigeoka reference appears to simply disclose forming a conductive film between electrodes by depositing a plurality of dots. The Shigeoka reference fails to disclose or suggest depositing lines of the dots such that, in a line-width direction, side portions of the lines are formed first and central portions of the lines are formed second.

Thus, as set forth above, neither the Shigeoka reference nor the prior art discussed in Applicant's Background disclose or suggest the following features of amended independent Claims 1, 7, 10, and 11: "wherein the film patterns are line-shaped patterns, a first side portion [Wa] and a second side portion [Wb] in a line width direction of each of the film patterns are formed before a central portion [Wc] of each of the film patterns is formed between the first side portion and the second side portion" (emphasis added). Therefore, the combination of the Shigeoka reference and the admitted prior art fails to render obvious amended Claims 1, 7, 10, and 11, as well as any claims dependent therefrom.

Applicant respectfully requests reconsideration and withdrawal of this Section 103 rejection of Claims 1, 7, 10, and 11, and those claims dependent therefrom.

The Motoi et al. Reference (U.S. Patent No. 6,017,259)

During a recent telephonic conversation with the Examiner, the Examiner indicated that U.S. Patent No. 6,017,259 to Motoi et al. may be relevant to the patentability of the invention. The Examiner specifically identified Figures 2 and 3 as possibly being relevant.

The Motoi et al. reference appears to disclose, with reference to Figure 3, peripheral film layers 4-1 and 4-3 deposited beneath a center film layer 4-2. However, the Motoi et al. reference fails to disclose or suggest the specific arrange of droplet deposition recited in the amended independent claims. Therefore, Applicants submit that the Motoi et al. reference fails to anticipate or render obvious independent Claims 1, 7, 10, and 11, as well as those claims dependent therefrom.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite

prosecution of this application, the Examiner is invited to telephone the undersigned
at (248) 641-1600.

Respectfully submitted,

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